Anjuman I Islam's
KALSEKAR TECHNICAL CAMPUS, NEW PANVEL
TE Sem III
School of Engineering & Technology

Subject: AM-III **Date: 01/09/16** **Marks: 20**
Duration:1hr **Branch: Electrical engg.**

Que. Attempt any 4 questions from the following questions (5 Marks each)

1. Find a,b,c,d,e if f(z) = $(ax^3+bxy^2+3x^2+cy^2+x) + i(dx^2- 2y^3+exy + y)$ is analytic.
2. Show that the function u = sin xcos hy + 2cos xsinhy + x^2-y^2+4xy satisfies Laplace's equation and find its corresponding analytic function f(z)= u+iv
3. Show that $\bar{F} = (y^2-z^2+3yz - 2x)\,i + (3xz + 2xy)\,j + (3xy-2xz+2z)\,k$ is both solenoidal and irrotational.
4. Using Green's Theorem evaluate $\int (2x^2-y^2)dx + (x^2+y^2)dy$ where C is the boundary of the surface enclosed by the lines x=0, y=0,x=2,y=3
5. Find the orthogonal trajectories of the family of curves $x^3y - xy^3 = c$
6. Find the image of the circle $|z| = k$, where k is real under the bilinear transformation $w = \frac{5-4z}{4z-3}$

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Subject: EDC
Date: 11/9/16
Class: Second Year

Marks: 20
Duration: 1Hr
Branch: Electrical

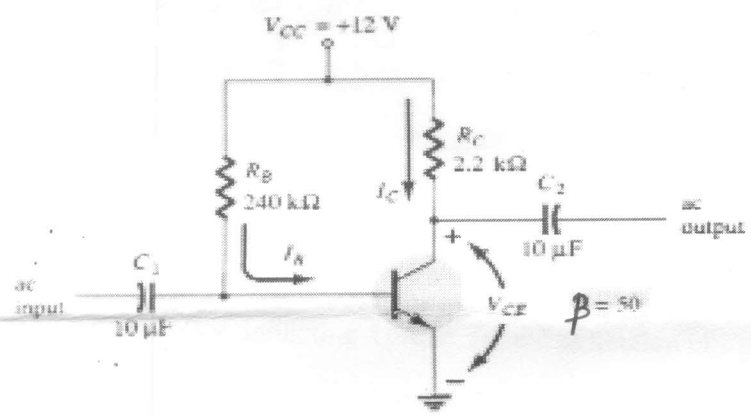
Q.1 Solve any two out of three (4 marks each)

(a) Draw and Explain a Bridge Rectifier with c-l-c filter.
(b) what is Thermal runaway.
(c) Write a short note on Construction and Operation of Schottky Diode.

Q.2 Solve any two out of three (6 marks each)

(a) Write a short note on h-parameter model.

(b) The fixed-bias configuration shown below. Calculate I_{BQ} and I_{CQ} and V_{CEQ}.



$V_{CC} = 12V$
$R_B = 240K\Omega$
$R_C = 2.2K\Omega$
$\beta = 50$
$C_1 = C_2 = 10\mu F$

(c) Derive the expression for volatge gain, current gain,input impedence and output impedence of CE amplifier.

.....ALL THE BEST.....

Subject: EEM
Marks: 20
Class: SE

Date: 03/ 09/ 2016
Duration: 1-Hr/s
Department: Electrical Engg

UNIT TEST I

I Answer any two question (5 marks each)

Q1) Explain measurement of medium resistance using Wheatstone bridge

Q2) Explain types of errors in electrical measurement

Q3) Explain Moving Iron instrument is unpolarized instrument

Q4) Write a short note on Megger

II Answer any one question (10 marks each)

Q1) Explain the construction and working of PMMC instrument. Also derive the equation for deflecting Torque Td and deflection Θ.

Q2) Explain with neat diagram Electrodynamometer type power factor meter? Show that power factor is proportional to its deflection.

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Subject:CNCPG **Date:** 2/9/16
Marks: 20
Duration: 1 Hr
Class: SE **Branch: ELECTRICAL**

Q.1 Attempt any two from given question

A) Draw layout of thermal power plant
B) Explain load factor, demand factor and plant capacity.
C) Explain artificial draught system in detail.

Q.2 Attempt any one from given question

A) Explain fluidised bed combustion method in detail.

B) The peak load on power plant is 60 MW. The maximum demands of 30 MW, 20 MW, 10 MW & 14MW are connected to the power plant. The capacity of power plant is 80MW And annual load factor is 0.5. Estimate average load, energy supplied per yr,demand factor And diversity factor.

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Symbol of Secularism & National Integration

Subject: EN **Marks: 20**

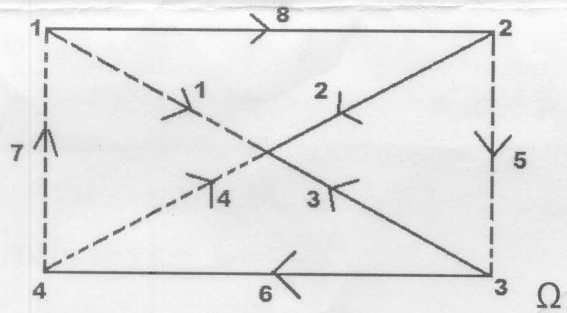
2/3/16

Class: S.E **Branch: Electrical Engineering**

Question number 1 is compulsory, answer any two in remaining

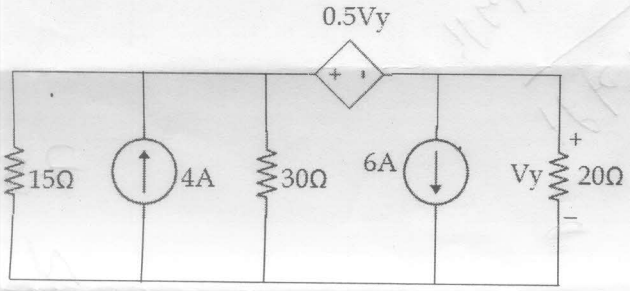
Q1 Explain Millman's theorem. 4M

Q2 Write fundamental tieset matrix and fundamental cutset matrix for the graph shown below. 8M



Ω

Q3 Use Nodal Analysis find Vy in the circuit. 8M



Q4 Find Loop currents using mesh analysis 8M